CLEONE

Water purifier

Complete User Manual

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Bluewater

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INTRODUCTION

About this manual

This manual contains complete user instructions for the Cleone. It gives you the necessary instructions to safely install, operate, do maintenance and do troubleshooting on the device.

Original language

The original language of this instruction is English, all other languages are translations of the original instruction.

Printing options

This manual is made to be printed as a double sided A4 or A5 booklet. The illustrations have a colour code, print the manual in colour to prevent mistakes.

Limited warranty

Refer to www.bluewater.se for more information on Limited warranty.

Disposal

At the end of the water purifier's life, disconnect the plug from the electrical supply and cut the cable at the point where it enters the appliance. Make sure that children do not play with the left-over cable. Contact your local authority for information about where the water purifier can be left, or contact your dealer.

Appliances bearing this symbol must be deposited at the designated local reception point for the disposal of electrical and electronic equipment. This product may not be disposed of using the normal household refuse collection processes.

Safety instructions

Before you install or operate the device, you must read the safety information. Obey the instructions in this manual to prevent injuries or damage to the equipment. This manual contains CAUTIONS and NOTICES that are applicable for the safe operation of the device.

A CAUTION identifies conditions that can cause damage to the equipment. Obey the instructions and do not continue until all conditions are accepted and engaged.

A Note identifies important information for a trouble free and optimal use of Cleone.

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Safety information

Install Cleone in accordance with local regulations. If you are not sure, contact a Bluewater dealer for aid. Bluewater has no responsibility for installation of Cleone.

Discard 4 tanks of water when Cleone is installed or when a filter is replaced. This water is not safe to use.

This appliance can be used by children who are more than 8 years old. It can also be used by persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge, if they have been given supervision or instruction about the use of the appliance in a safe way and understand the hazards involved.

Do not disconnect the external water tubes, and do not do work on them. Speak to your Bluewater dealer for aid if you must disconnect water tubes. In an emergency, follow the instructions in the Complete User manual.

Do not repair or change the internal components of Cleone. This can make Cleone operate incorrectly, or make it dangerous to use.

Use only the original Bluewater power adapter as electrical power source for your Cleone. To use a different power adapter can make Cleone dangerous to use. It can also cause damage to internal parts of the Cleone. Do not use the cord if there are visible signs of damage on it. If the supply cord is damaged, replace it in order to prevent danger.

Only approved Bluewater staff can do servicing, maintenance and repairs on Cleone. Only use original replacement cartridges and parts from Bluewater.

Do not put Cleone in water. Clean the surface with a moist cloth and a weak soap solution. Do not use chemicals to clean the surface of Cleone. Alcohol, petrol, organic and inorganic acids, strong basic chemicals (such as concentrated dish washing detergent) will cause damage to the surface of Cleone.

Do not put or keep objects on top of Cleone.

Do not use Cleone on feed water that is microbiologically dangerous, or where the microbiological quality is not known.

PRODUCT OVERVIEW

Cleone outside

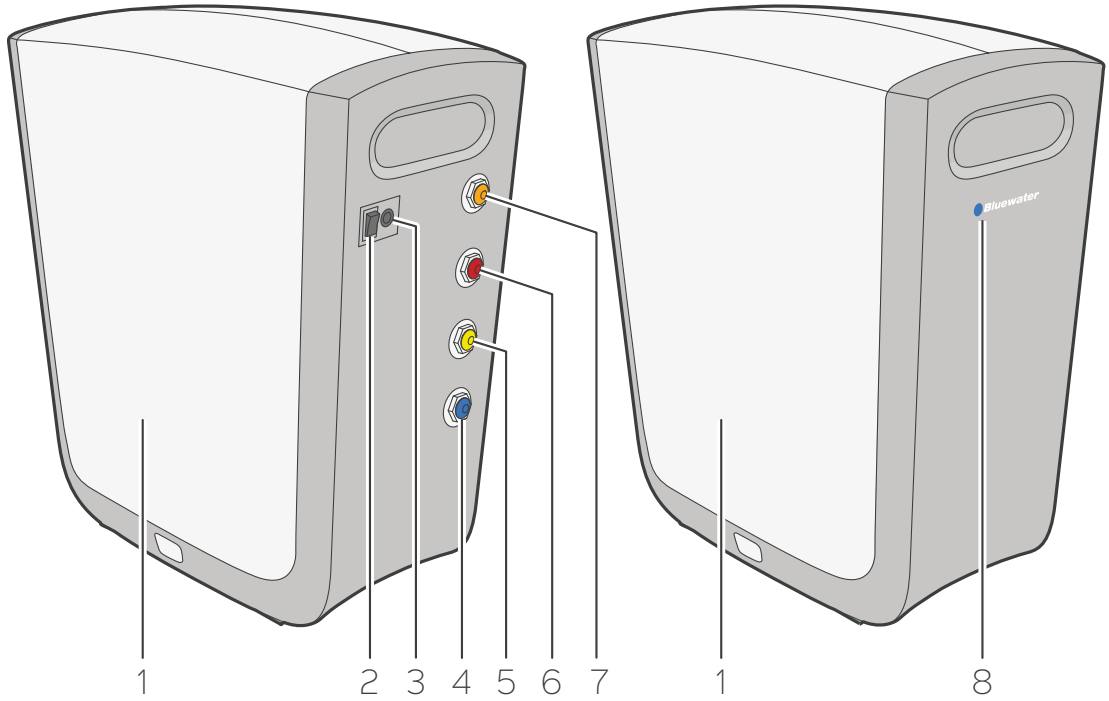

Figure 1. Cleone outside

Pos	Description	Pos	Description
1	Side cover	5	Clean water tank connector - YELLOW
2	Power switch	6	Drain water connector - RED
3	Electrical connection	7	Feed water connector - ORANGE
4	Clean water faucet connector - BLUE	8	System operation indicator

Power switch

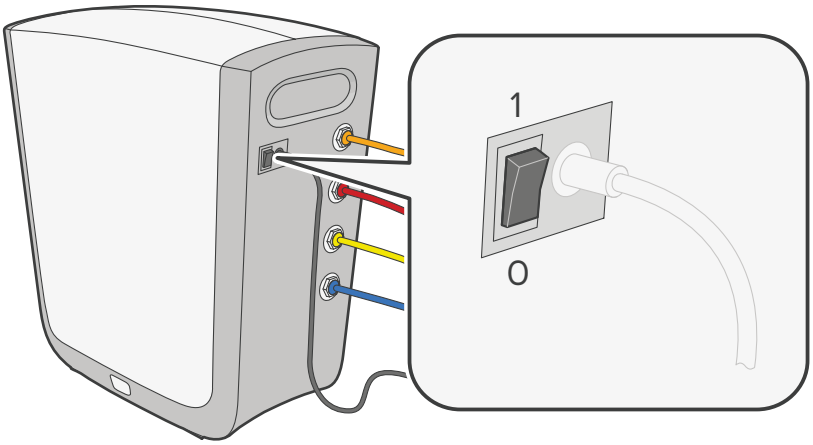

Figure 2. Power switch

Position	Description
1	Cleone is started. Water can be cleaned.
0	Cleone is stopped. No water is cleaned. Water from the clean water tank can be used until the tank is empty.

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System operation indicator

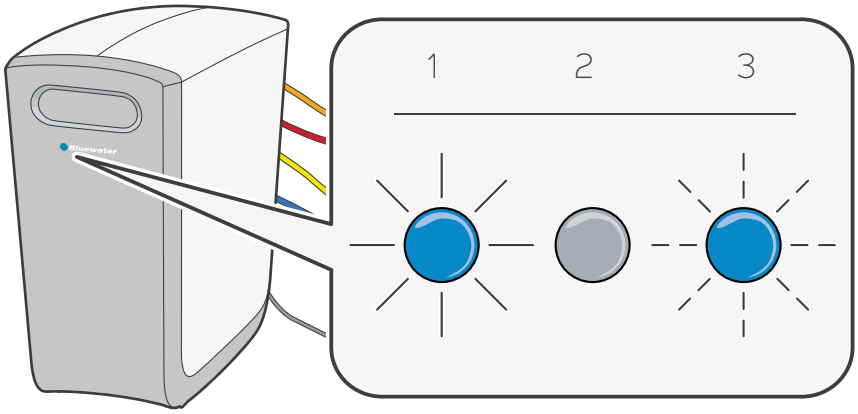

Figure 3. System operation indicator

Pos	Description
1	On – Cleone operates correctly.
2	Off – Cleone is shut off. If power switch is in position “1” See “Troubleshooting” on page 10.
3	Flashes – There is a problem with Cleone. Contact your Bluewater dealer.

Cleone inside

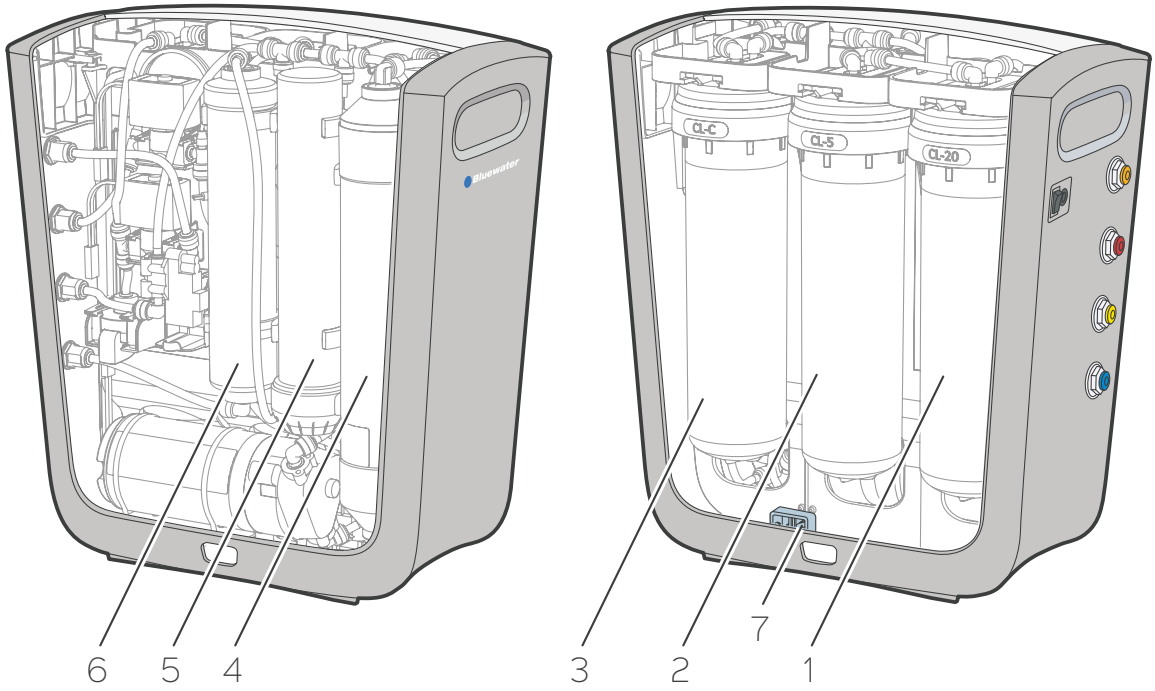

Figure 4. Cleone inside

Pos	Description	Pos	Description
1	Coarse sediment prefilter (CL-20)	5	Activated carbon postfilter (CL-Inline-C) (Classic, MIN, UV) UV lamp (MIN-UV)
2	Fine sediment prefilter (CL-5)	6	UV lamp (UV) Integrated mineral filter (MIN, MIN-UV)
3	Activated carbon prefilter (CL-C)	7	Leak protection system switch
4	Reverse osmosis membrane		

SYSTEM OVERVIEW

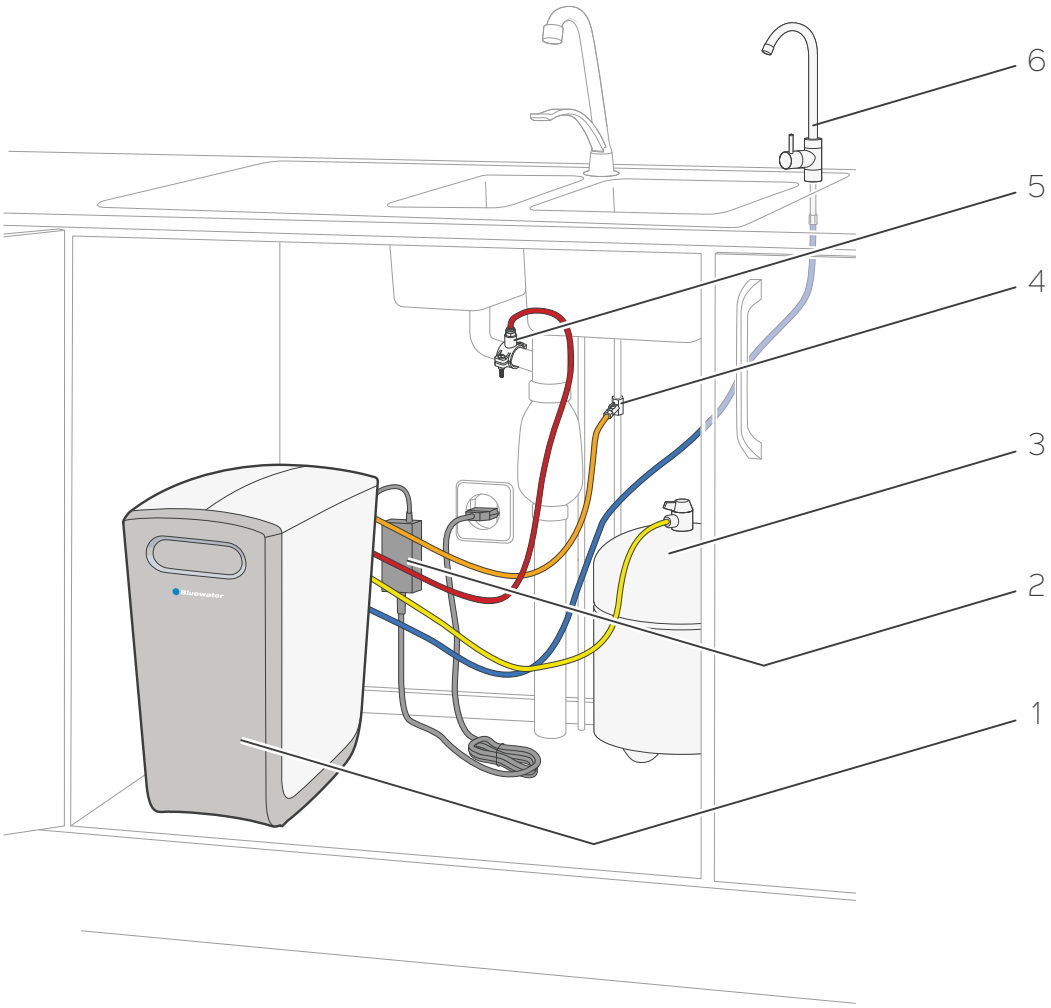

Figure 5. System overview

Pos	Description	Pos	Description
1	Cleone water purifier	4	Feed water connection
2	Power adapter	5	Drain water connection
3	Clean water tank	6	Clean water faucet

Clean water tank

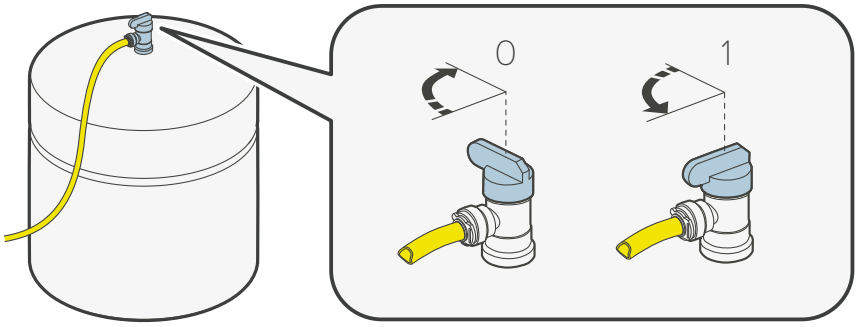

Figure 6. Clean water tank valve

Pos	Description
0	Valve closed – no water can flow
1	Valve open – water can flow to and from the tank

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Clean water faucet

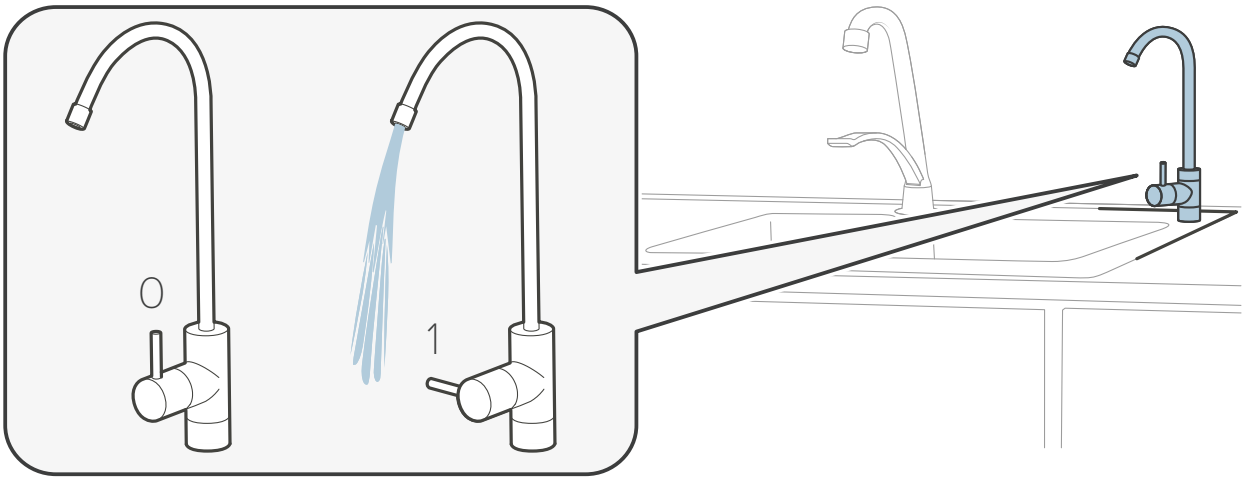

Figure 7. Clean water faucet

Pos	Description
0	Clean water faucet in closed position
1	Clean water faucet in open position

Water filtration system

Cleone cleans water in three steps: prefiltration, membrane filtration and postfiltration. Clean water from Cleone is collected in the clean water tank. When the tank is full, Cleone is put in standby mode. When the clean water tank level is low, Cleone opens the feed water supply and starts to clean water.

Water connections

There are four water connectors on the connection side of Cleone. The collet rings and tubing have a color code.

Color	Connection	Description
ORANGE	Feed water	The feed water connection supplies feed water to Cleone.
RED	Drain water	Drain water from Cleone to the drain pipe contains flushed and rejected contamination.
YELLOW	Clean water tank	Clean water is collected in the clean water tank before it is supplied to the clean water faucet.
BLUE	Clean water faucet	Clean water from Cleone to the clean water faucet.

Intelligent membrane flush

The reverse osmosis filter is flushed with water during filtration and in standby mode. The membrane is also flushed before the cleaning cycle starts. This makes sure that the cleaning process always starts with fresh feed water.

Leak protection system

A sensor at the bottom of Cleone senses water leaks. If there is a leak, the feed water supply is stopped. Cleone cannot be started again until the leak has been repaired.

INSTALLATION

Install Cleone in accordance with local regulations. If you are not sure, contact a Bluewater dealer for aid. Bluewater has no responsibility for installation of Cleone.

If the Cleone is connected to a portable water system, the system shall be protected against backflow.

Before installation

Remove the cable ties under Cleone before it is installed. They are used for load securing of the pump.

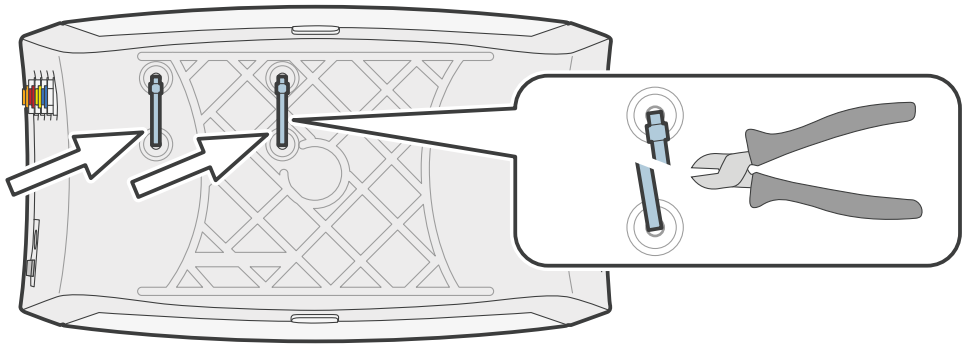

Figure 8. Remove cable ties

Install clean water faucet

The measurement A is found in the specification that comes with the clean water faucet.

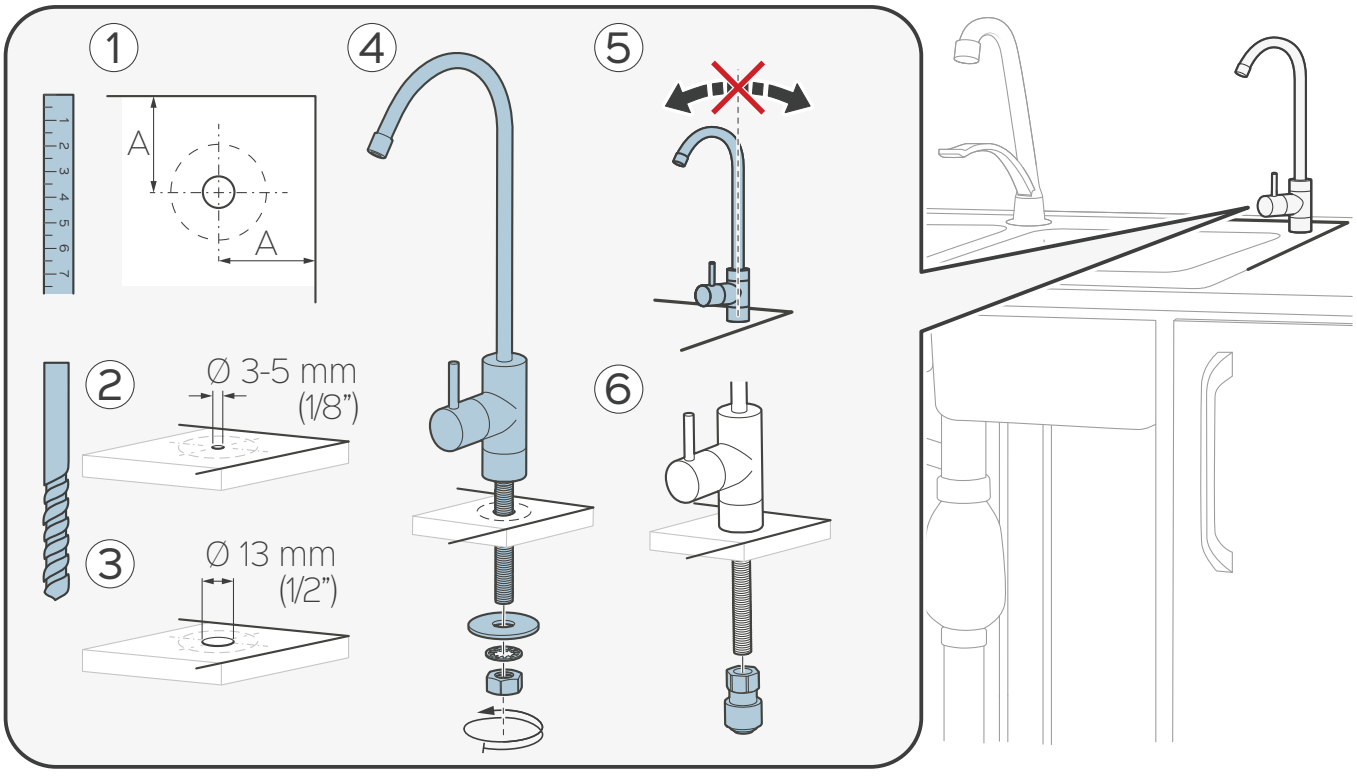

Figure 9. Install clean water faucet

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Install feed water connection

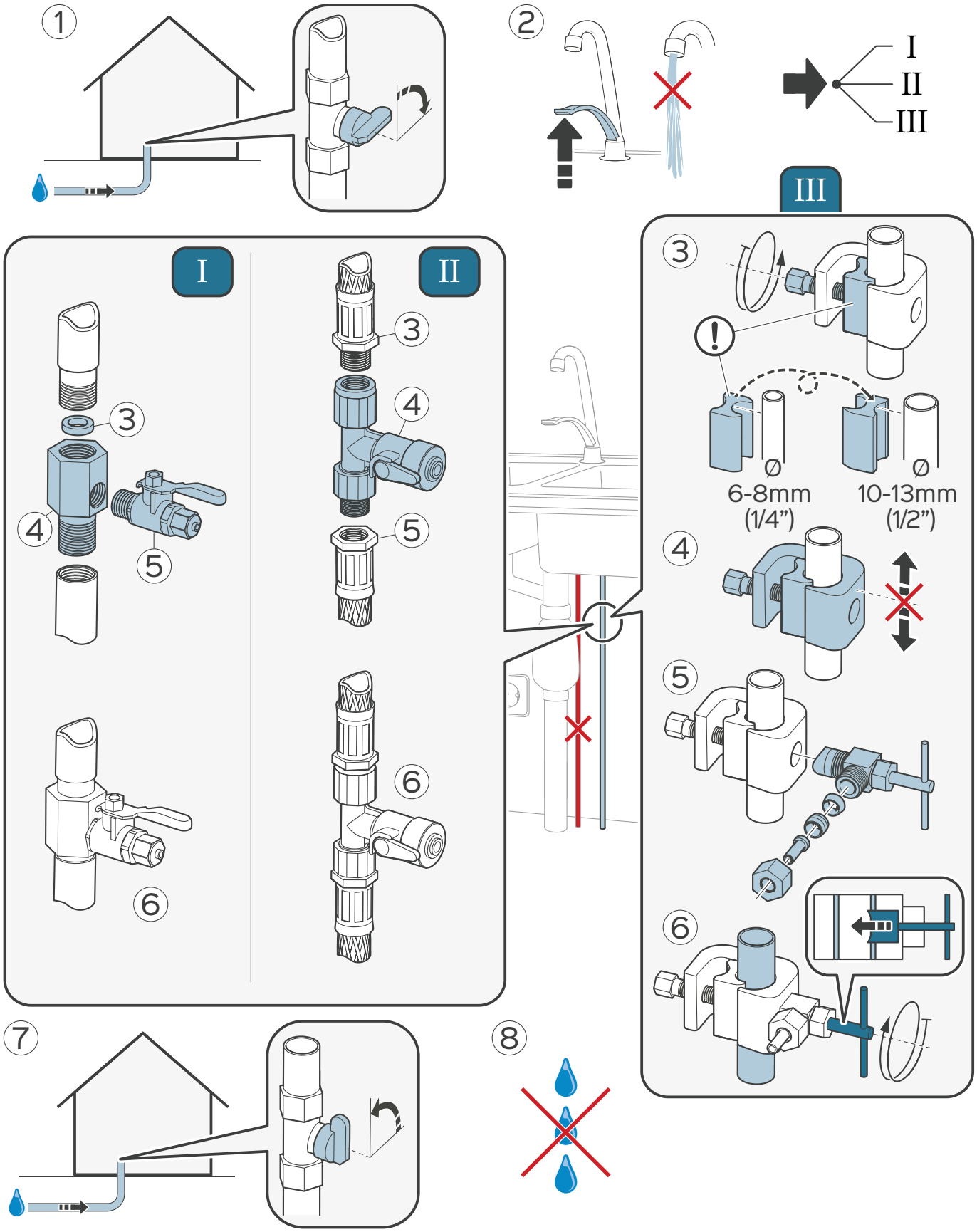

Figure 10. Install feed water connections

Install drain water connection

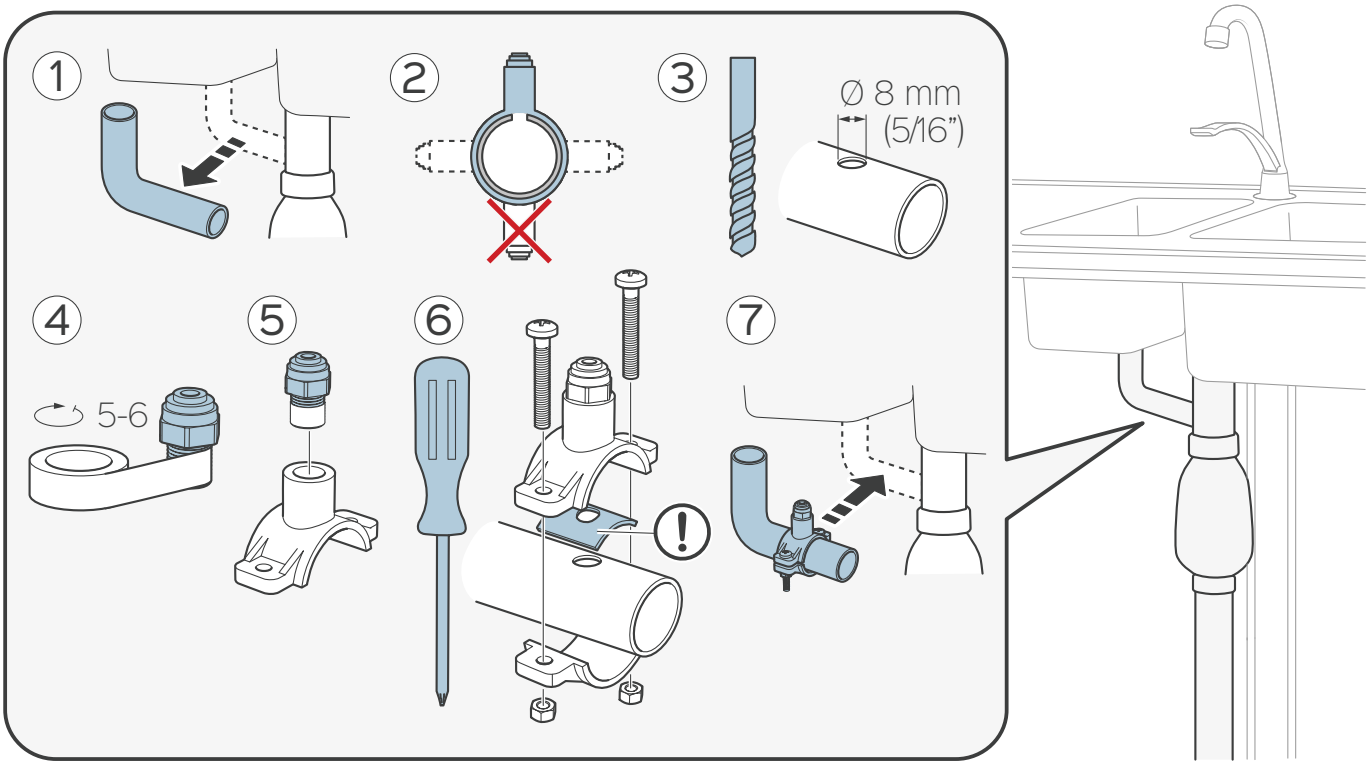

Figure 11. Install drain water connection

Install clean water tank

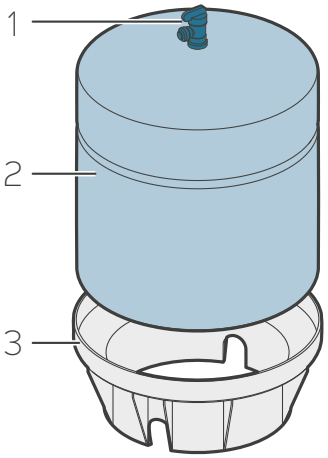

Figure 12. Install clean water tank

Action	Step
1	Install clean water tank valve (1).
2	Put the tank (2) under the kitchen sink. (Use the stand (3) if it is included.)

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Connect tubing

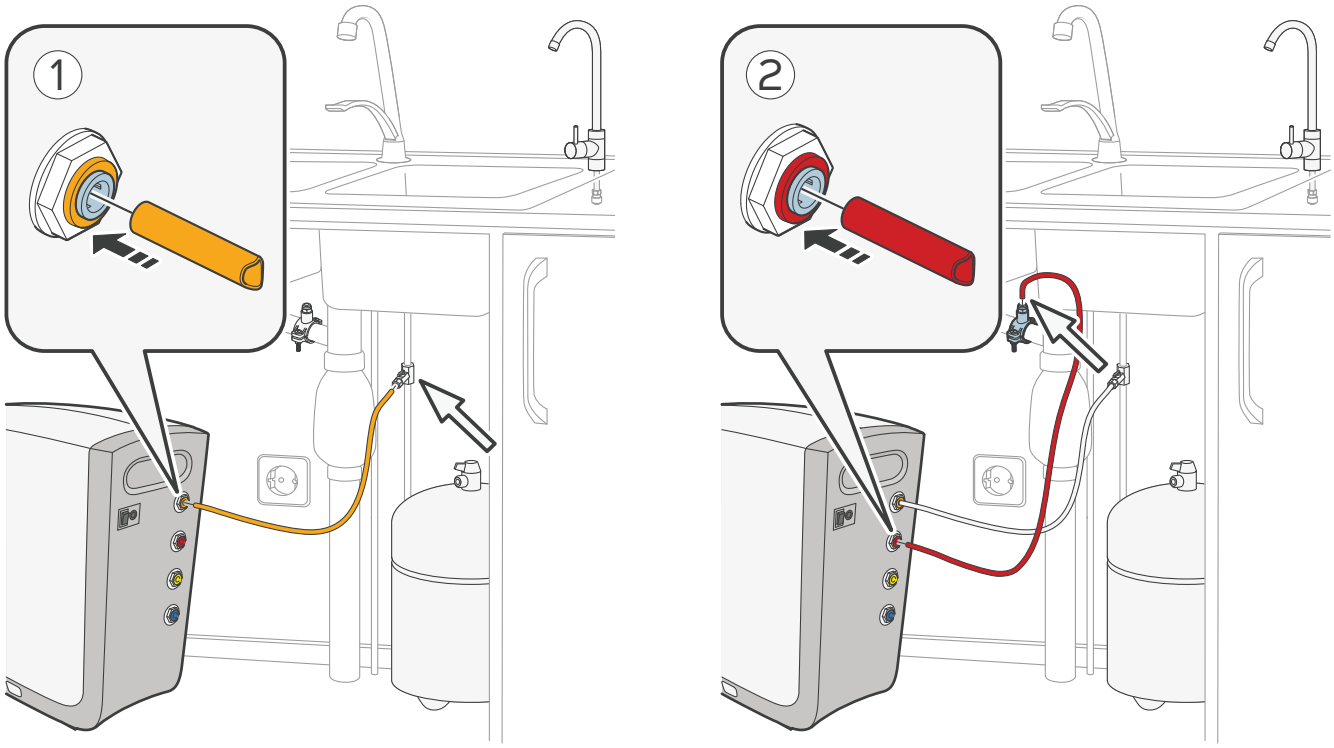

Figure 13. Connect tubing, ORANGE (1) and RED (2)

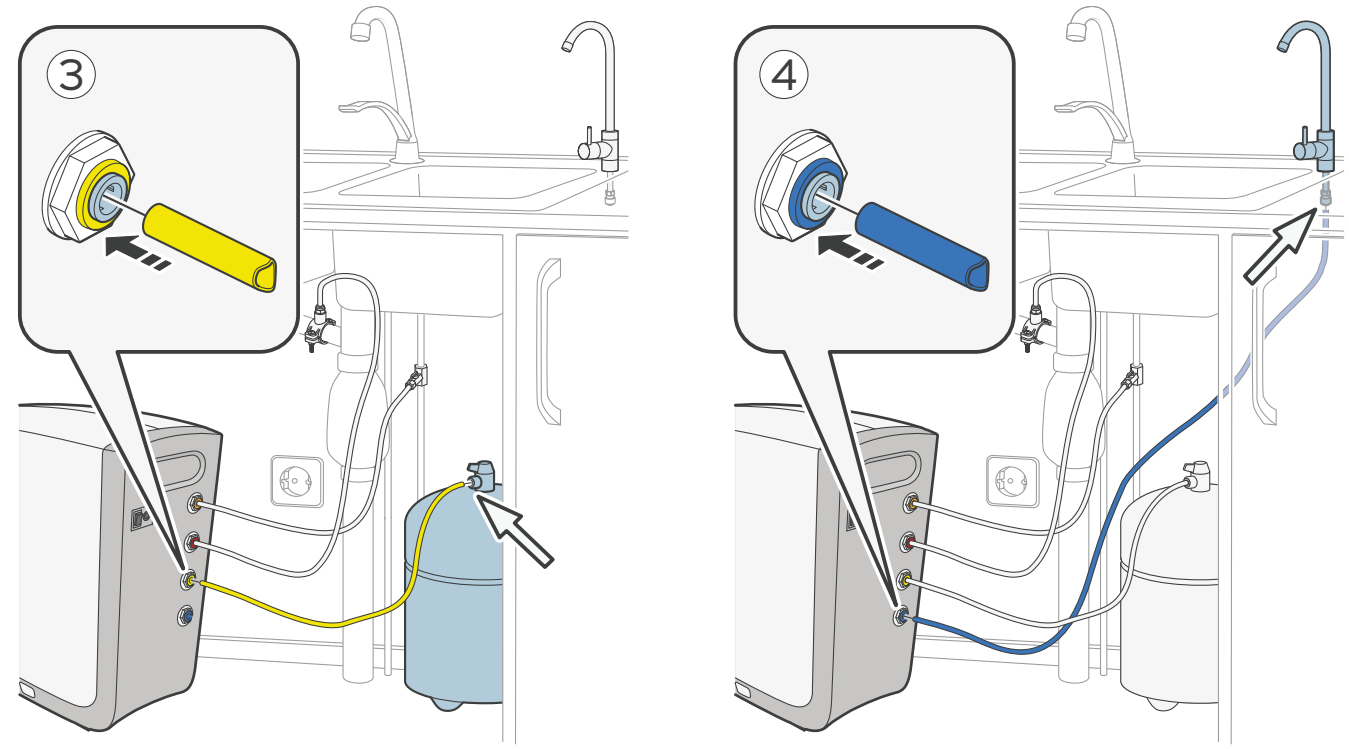

Figure 14. Connect tubing, YELLOW (3) and BLUE (4)

Secure water connectors with safety locking clips

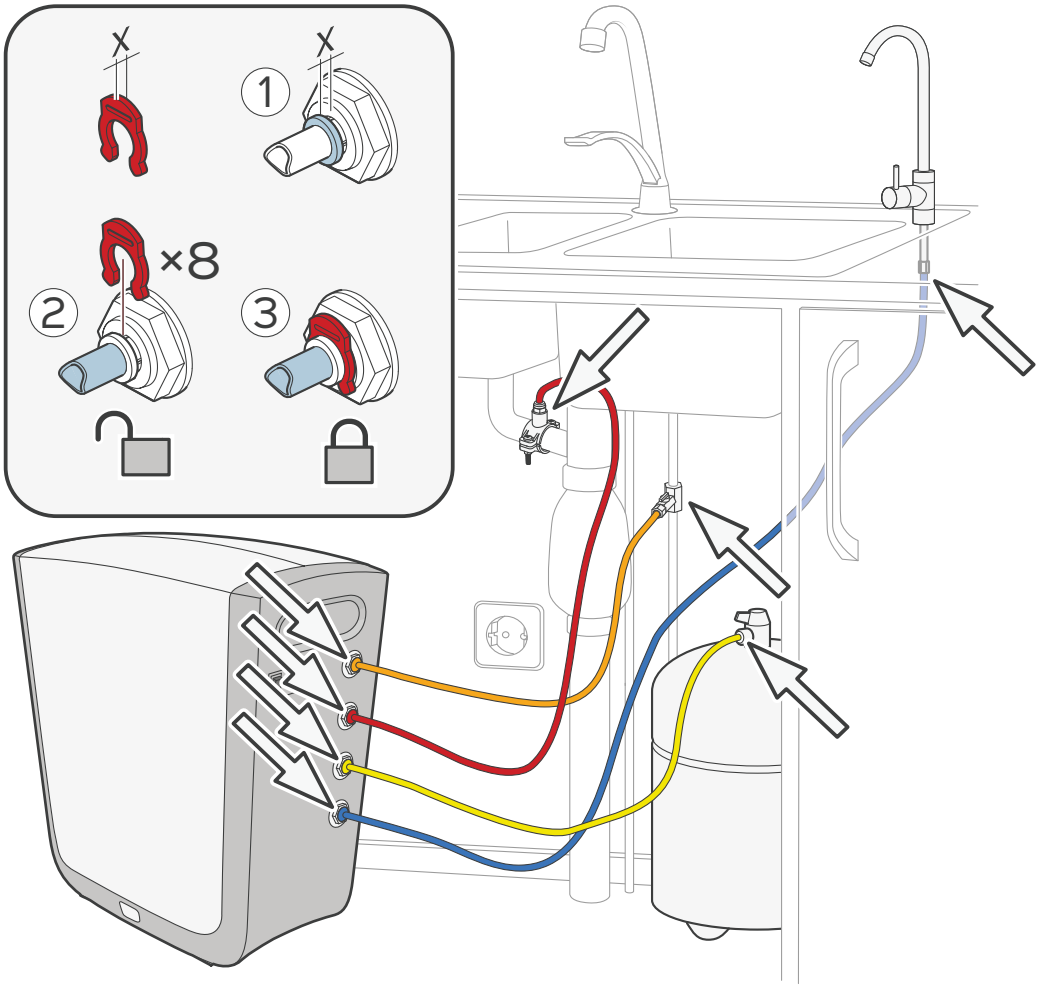

Figure 15. Safety locking clips

Open feed water valve

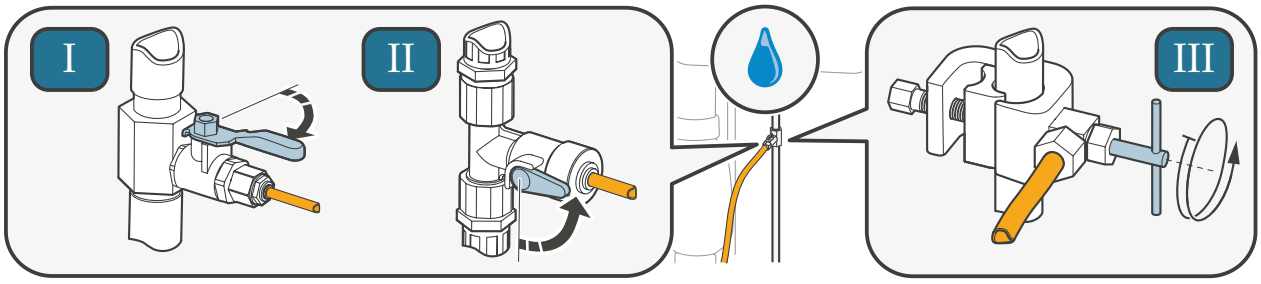

Figure 16. Open feed water valve

Action	Step
III	Turn the valve handle counter clockwise until it is fully open.

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Install power adapter

See “Technical information” on page 30 for allowed electric current and frequency.

Use only the original Bluewater power adapter as electrical power source for your Cleone. To use a different power adapter can make Cleone dangerous to use. It can also cause damage to internal parts of the Cleone.

Do not use the cord if there are visible signs of damage on it. If the supply cord is damaged, replace it in order to prevent danger.

US installation:

- Install the power adapter in a cabinet or on a wall, adjacent to the under counter space in which the water purifier will be installed.
- There must be an opening in the partition between the compartments that is large enough for the attachment plug to go through. The longest dimension of the opening must not be longer than 1 1/2 in (38 mm).
- The edges of the opening must be smooth and rounded if the partition is wood, or covered with an edge protector supplied for this function by the manufacturer if the partition is metal.
- Be careful when the appliance is installed or removed, to decrease the risk of damage to the supply cord.

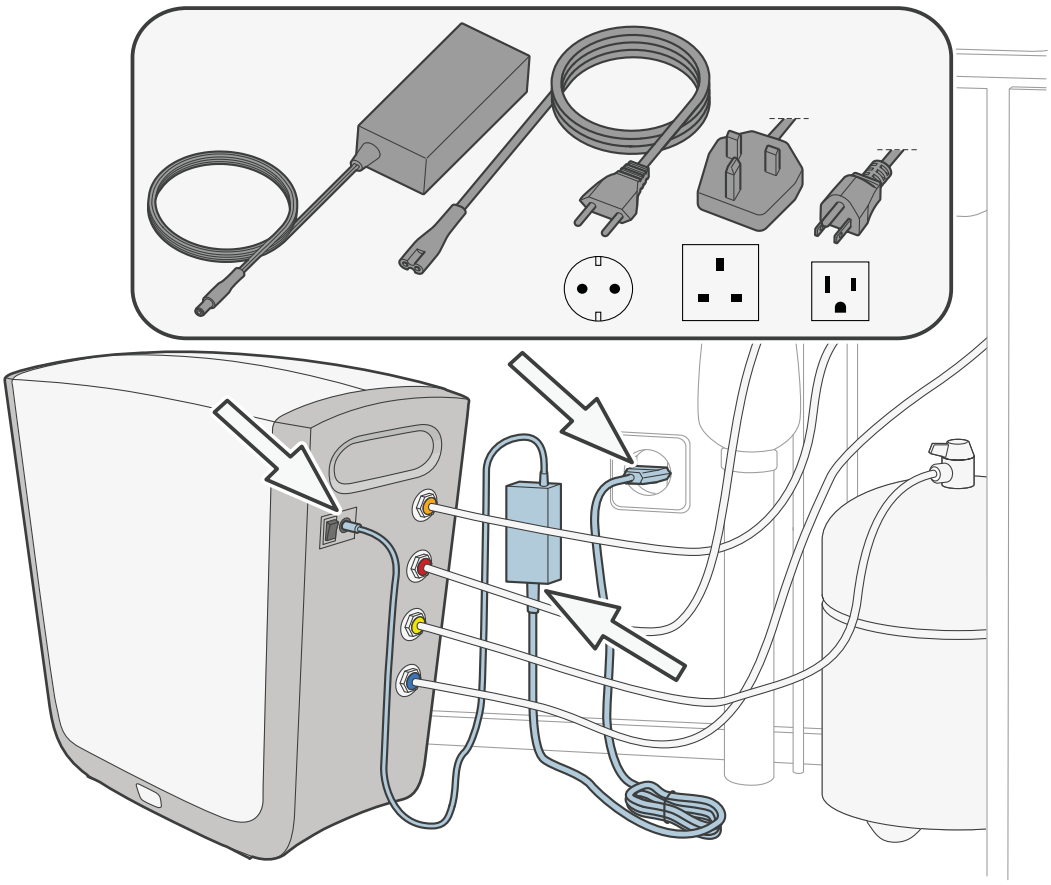

Figure 17. Install power adapter

After installation

When Cleone is installed, and after each maintenance, the following procedures must be perfomed before operation.

Flush Cleone

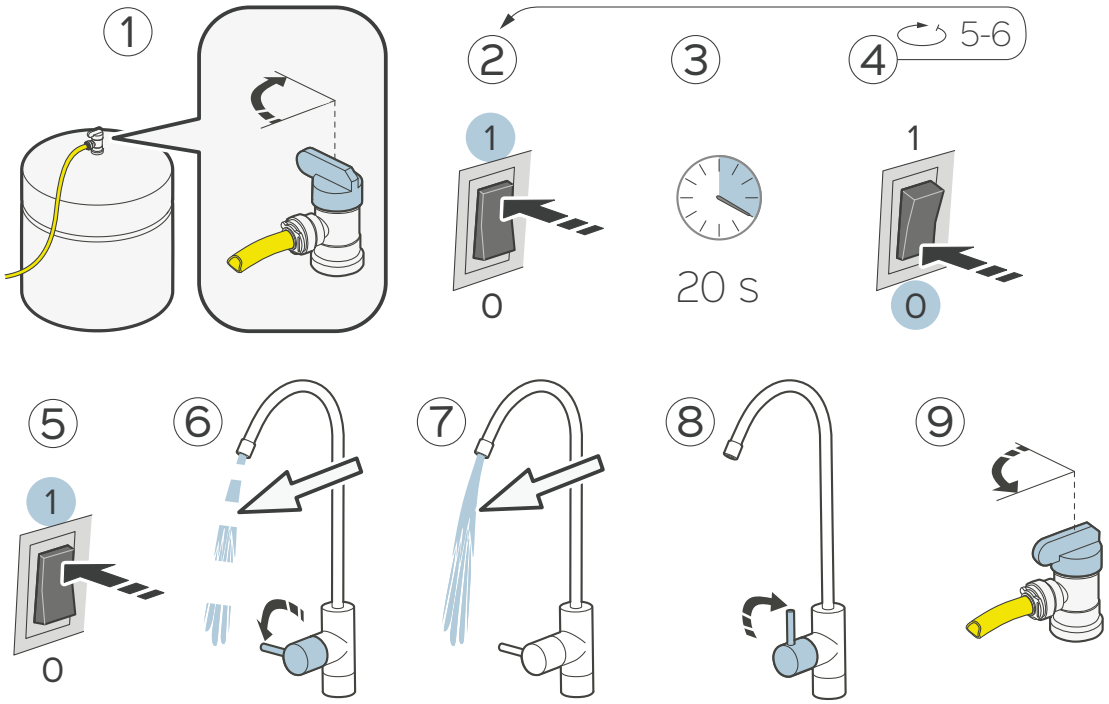

Figure 18. Flush Cleone

Condition Cleone

Do not use the water from the conditioning procedure! The reverse osmosis membrane is factory disinfected with a biocidic preservative solution.

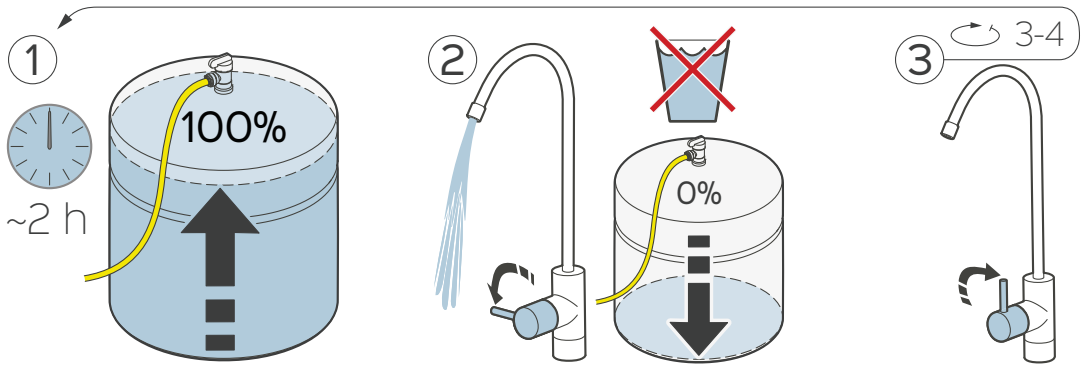

Figure 19. Condition Cleone

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Do a check for leaks

The tubing connections must be tight!

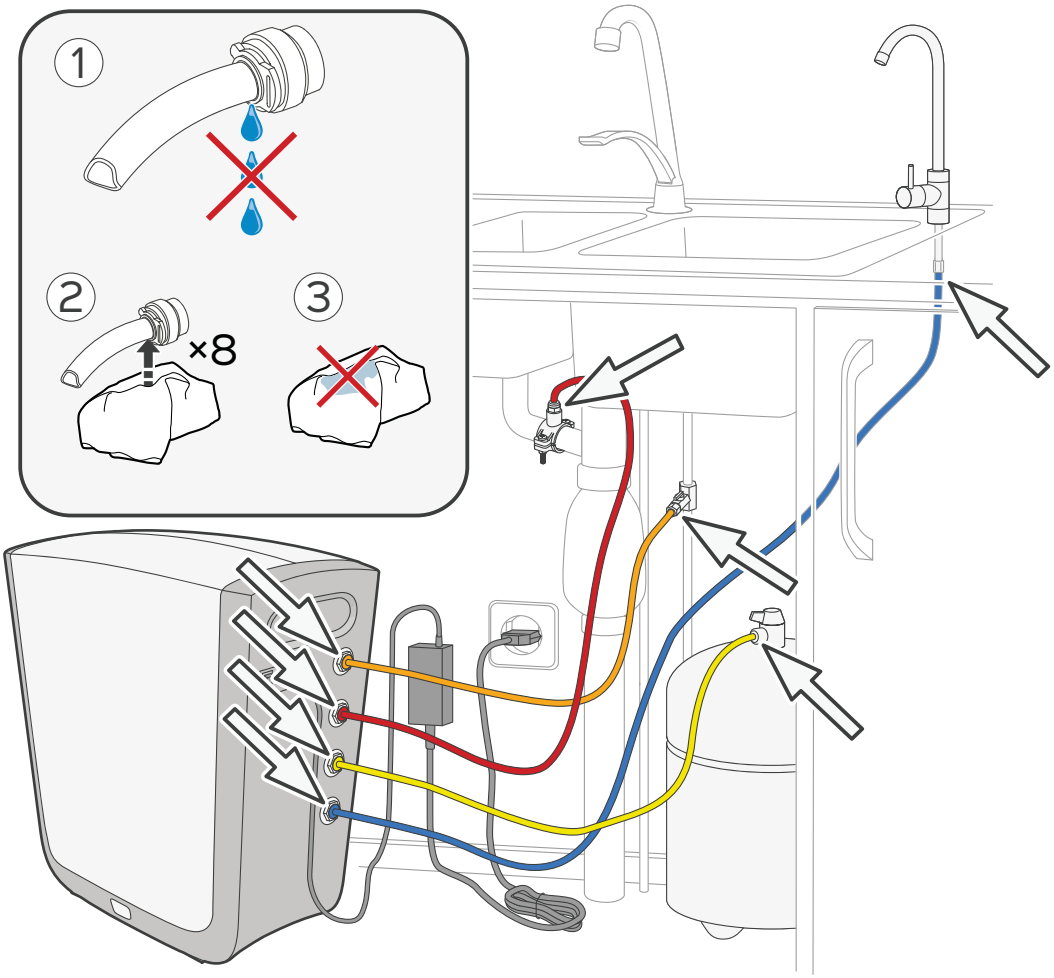

Figure 20. Check for leaks

Repair leaks

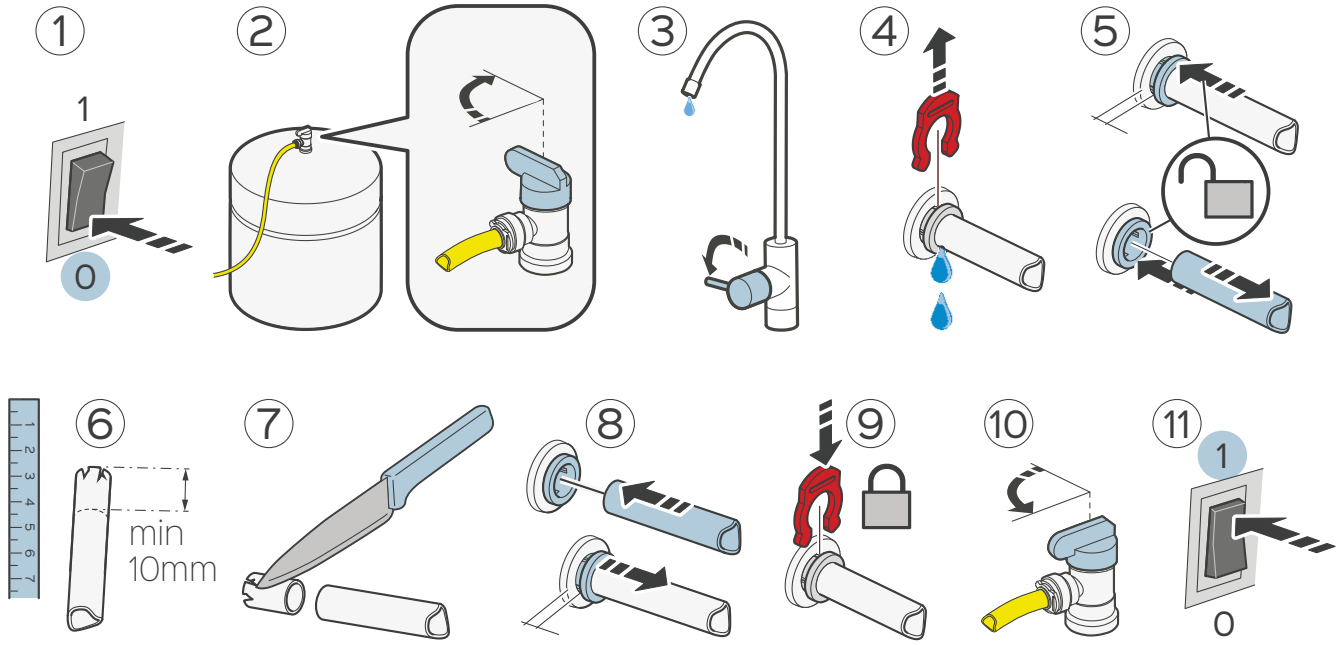

Figure 21. Repair leaks

Do a membrane flushing functionality check

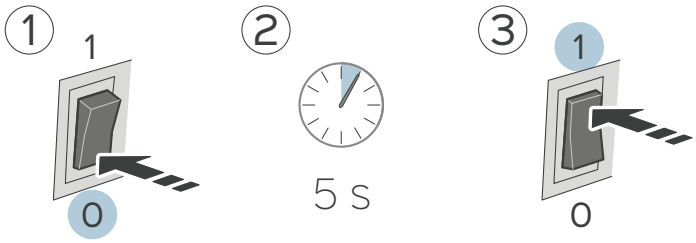

Figure 22. Membrane functionality check

Result:	The water system opens the flush solenoid valve, and flushes water during 20 seconds. Cleone then starts to clean water again.

Do an automatic water shut off check

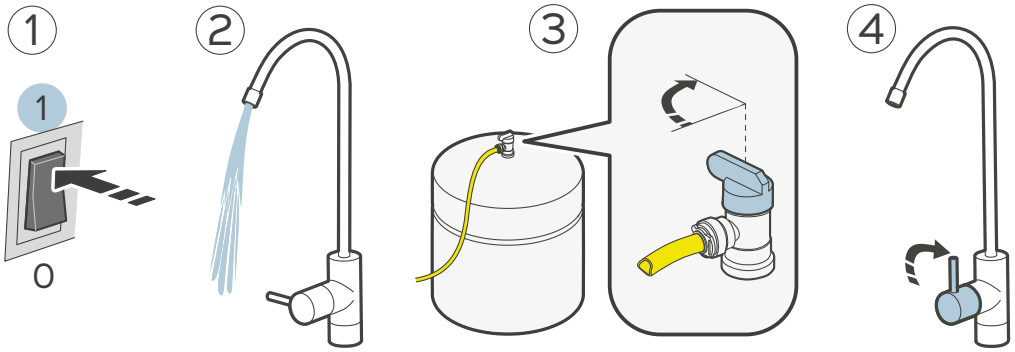

Figure 23. Automatic water shut off check

Result:	After 1 minute or less, Cleone closes the feed water valve. No water flows to the drain.

Do a leak protection system check

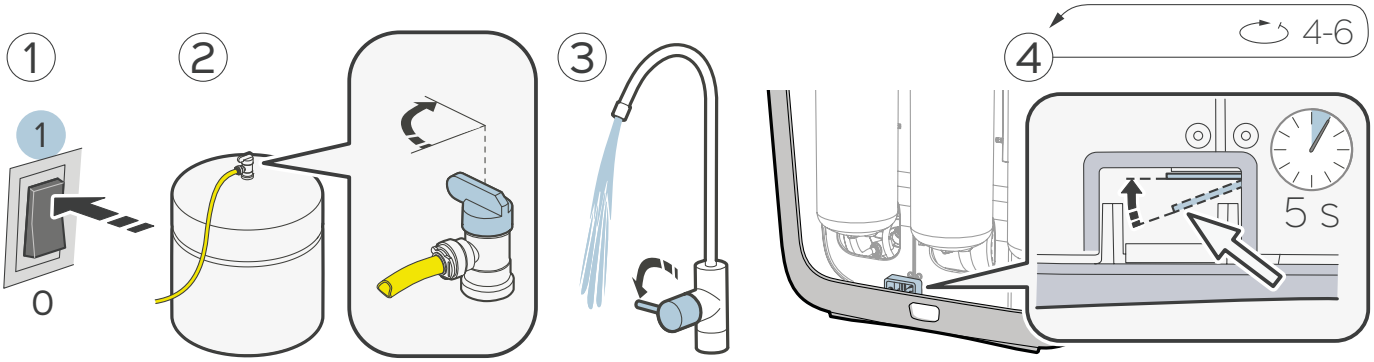

Figure 24. Leak protection system check

Result:	The feed water valve closes immediately. No water flows to the drain. If Cleone has a booster pump, it stops. The system operation indicator on the front of Cleone goes off. When the microswitch is released, Cleone cleans water again.

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MAINTENANCE

After each maintenance, all procedures in chapter “After installation” on page 15, must be perfomed before operation.

Regular maintenance is important for correct function and long term operation. Only educated and approved personnel can do the maintenance.

The water quality controls the maintenance frequency. If the feed water contains high levels of suspended solids, more frequent maintenance can be necessary.

Remove and install side covers

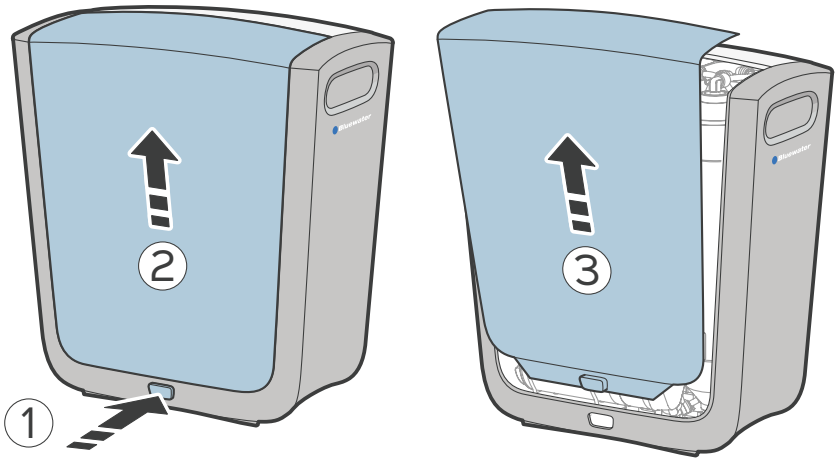

Figure 25. Remove side cover

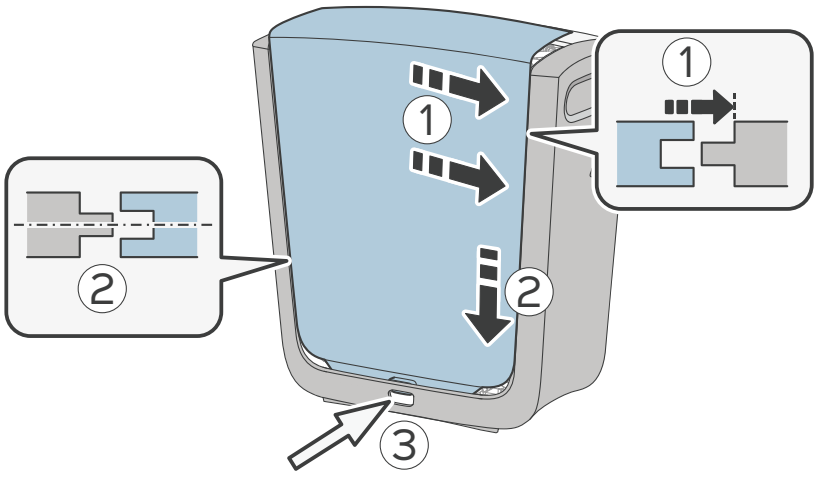

Figure 26. Install side cover

Each 6 months

Replace prefilters and integrated mineral filter

Always flush the activated carbon prefilter after the filter is replaced. See “Flush Cleone” on page 15.

The instruction applies to the coarse sediment prefilter, the fine sediment prefilter and the activated carbon prefilter.

See “Product overview” on page 05 for filter positions and models.

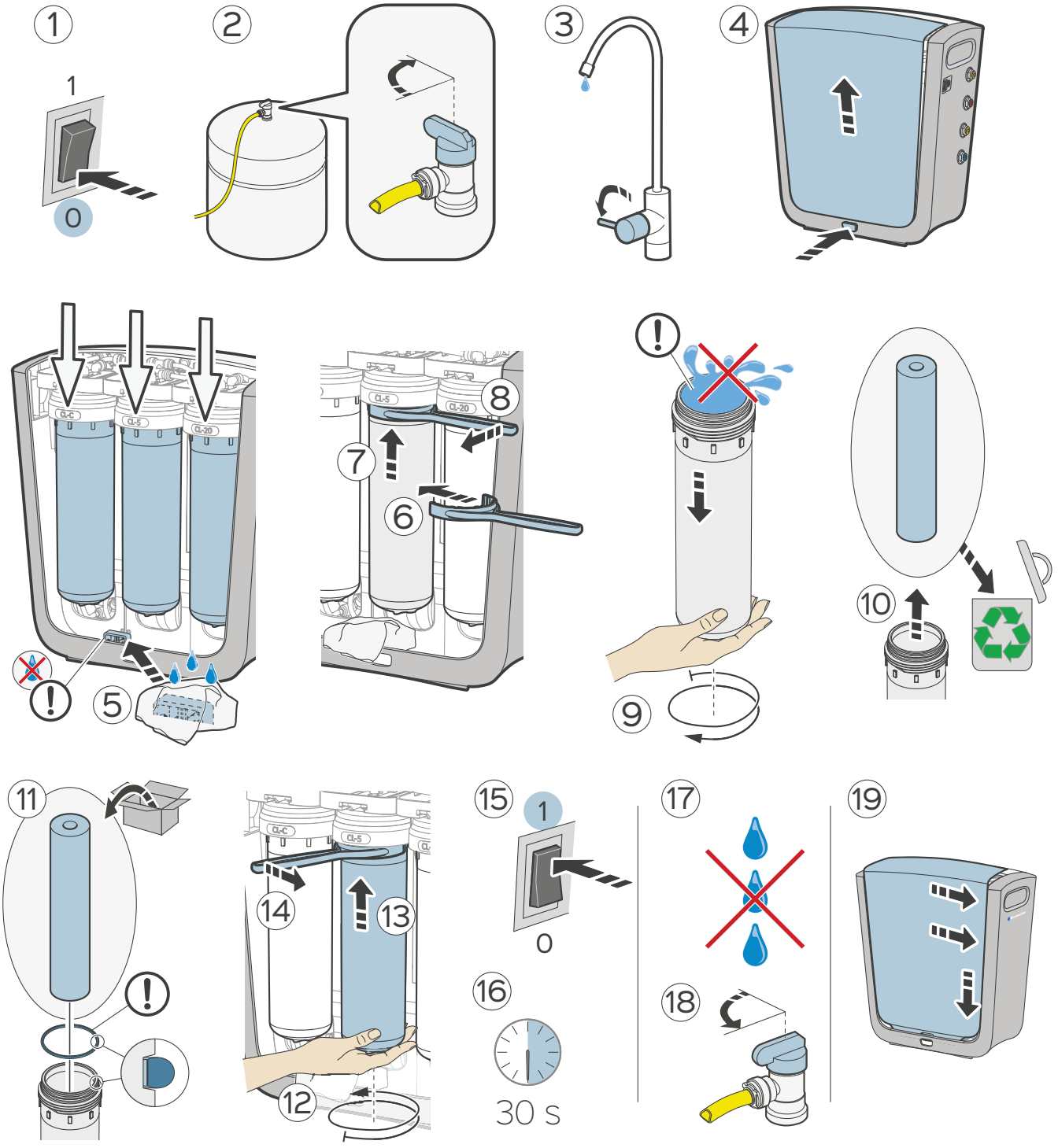

Figure 27. Replace prefilters

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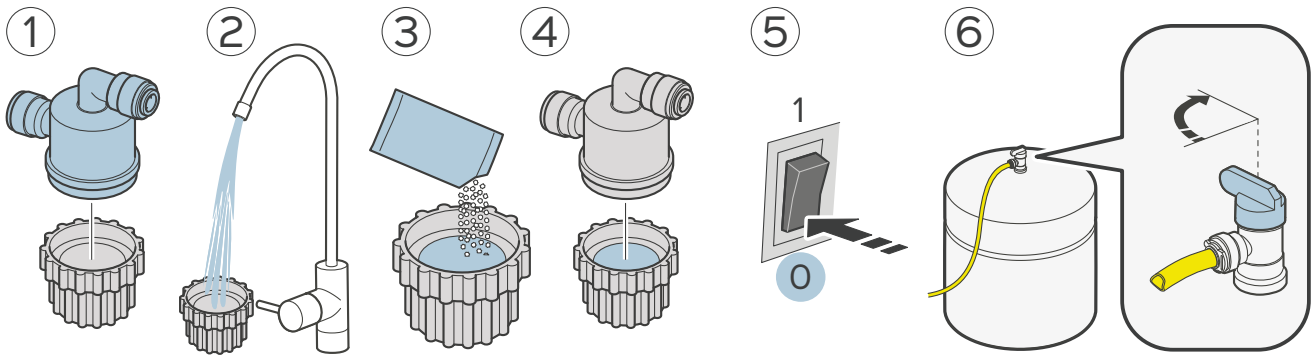
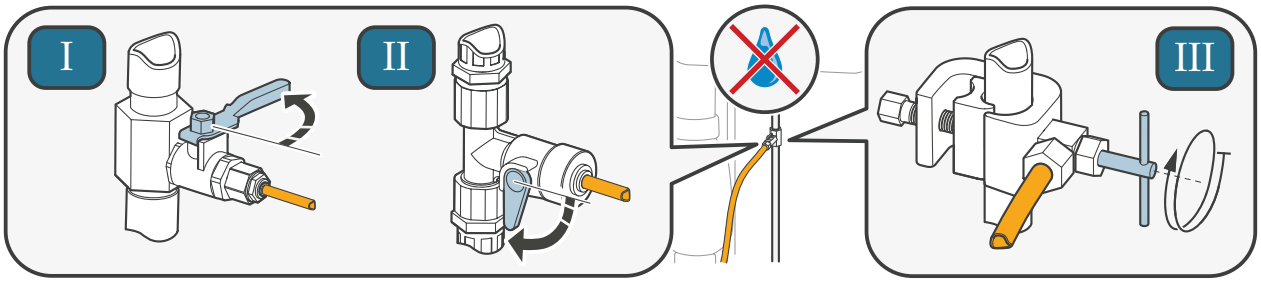
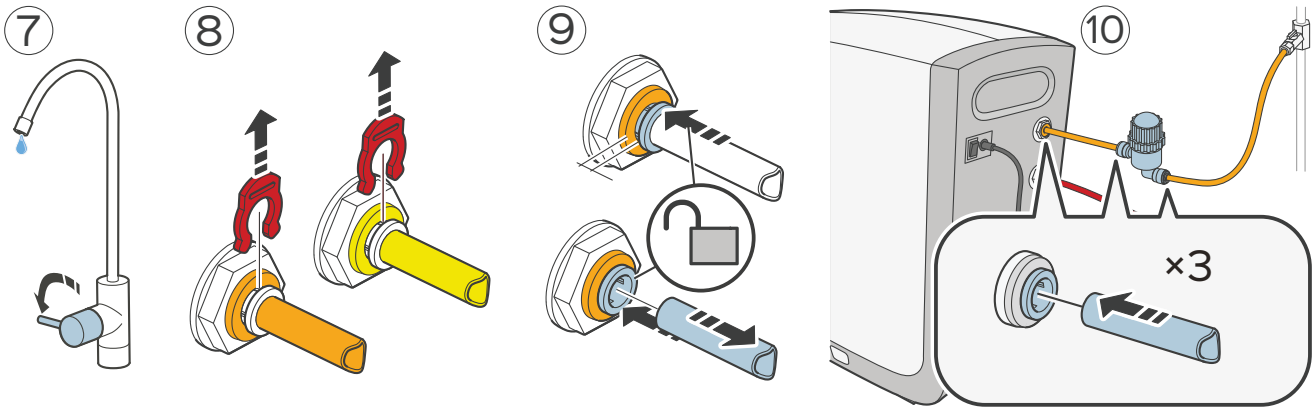
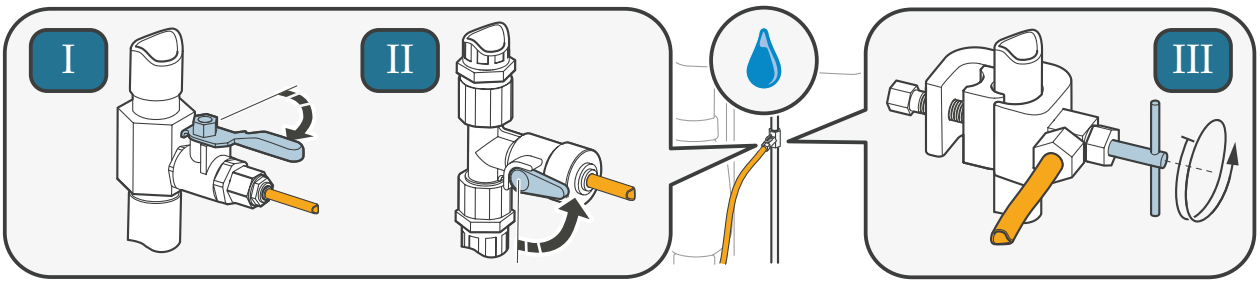
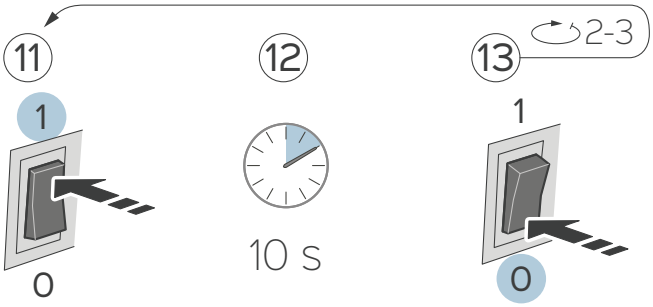
Disinfectant is harmful! Always flush and condition Cleone after disinfectant is used. See “Flush Cleone” on page 15 and “Condition Cleone” on page 15.

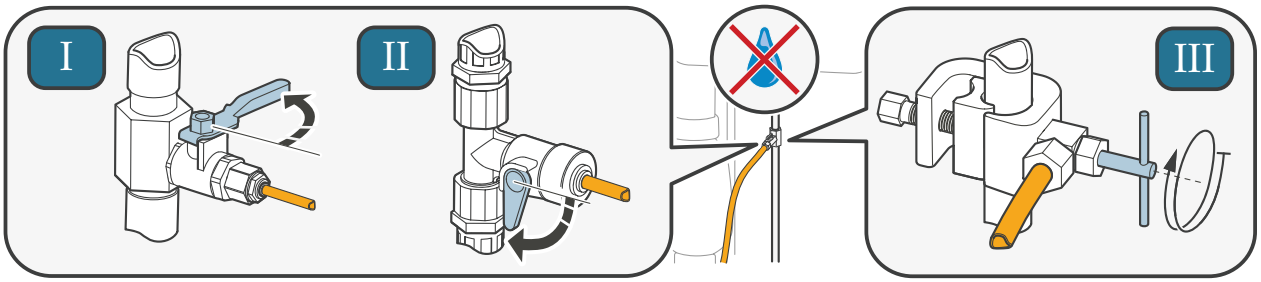


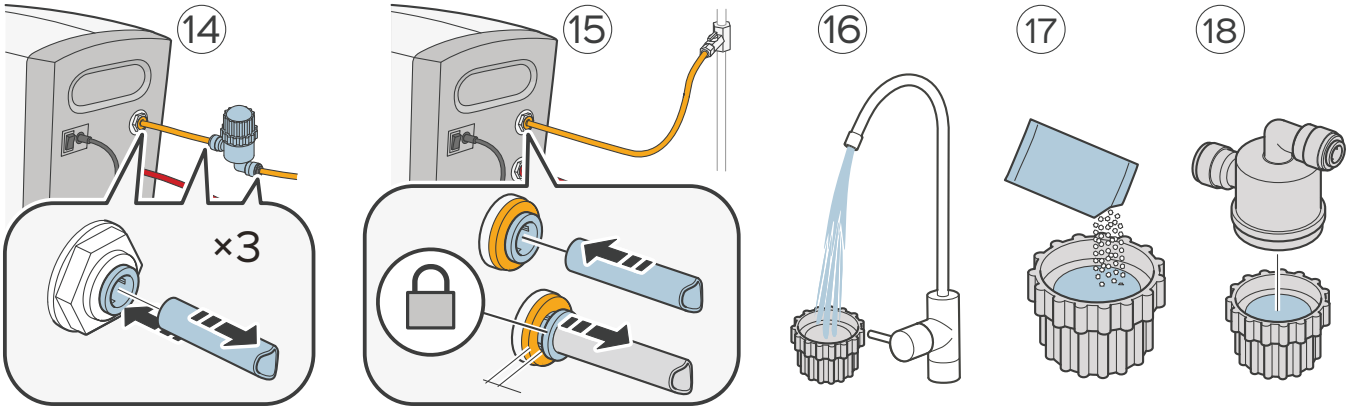


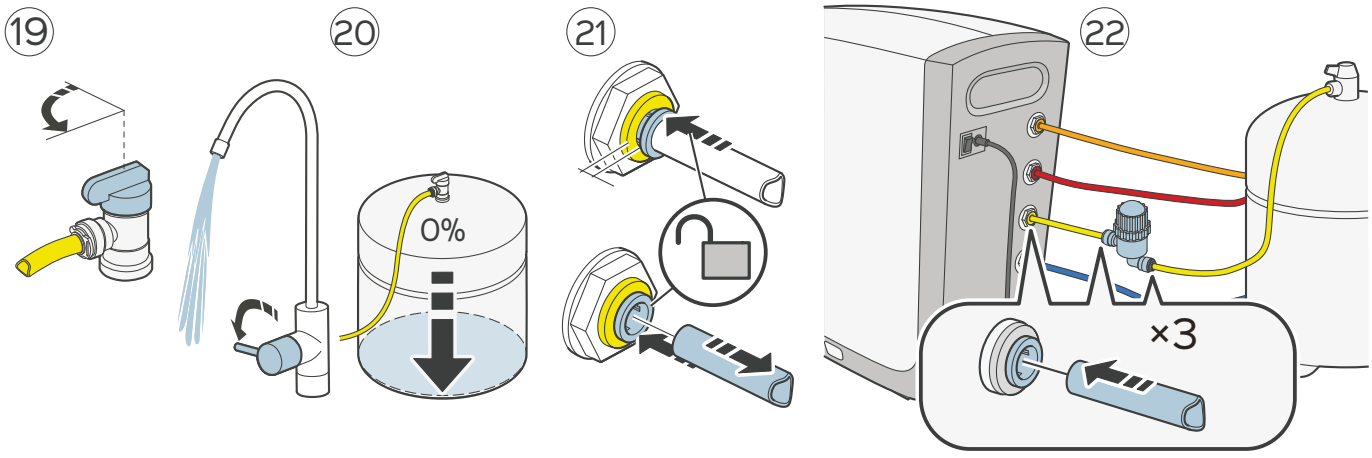


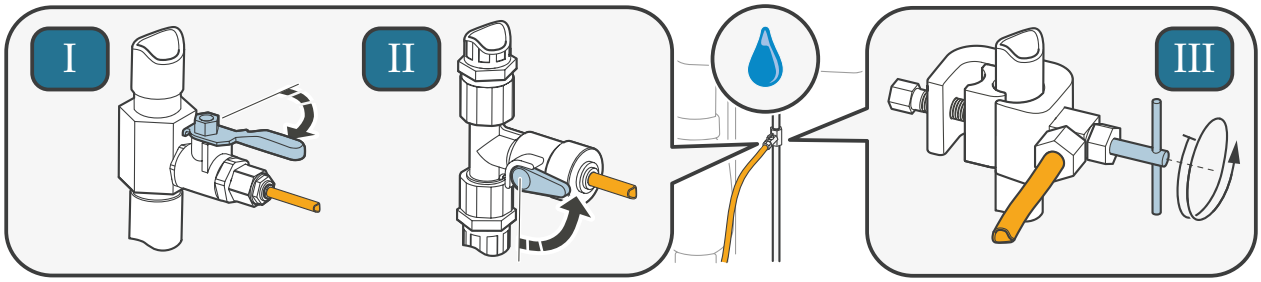












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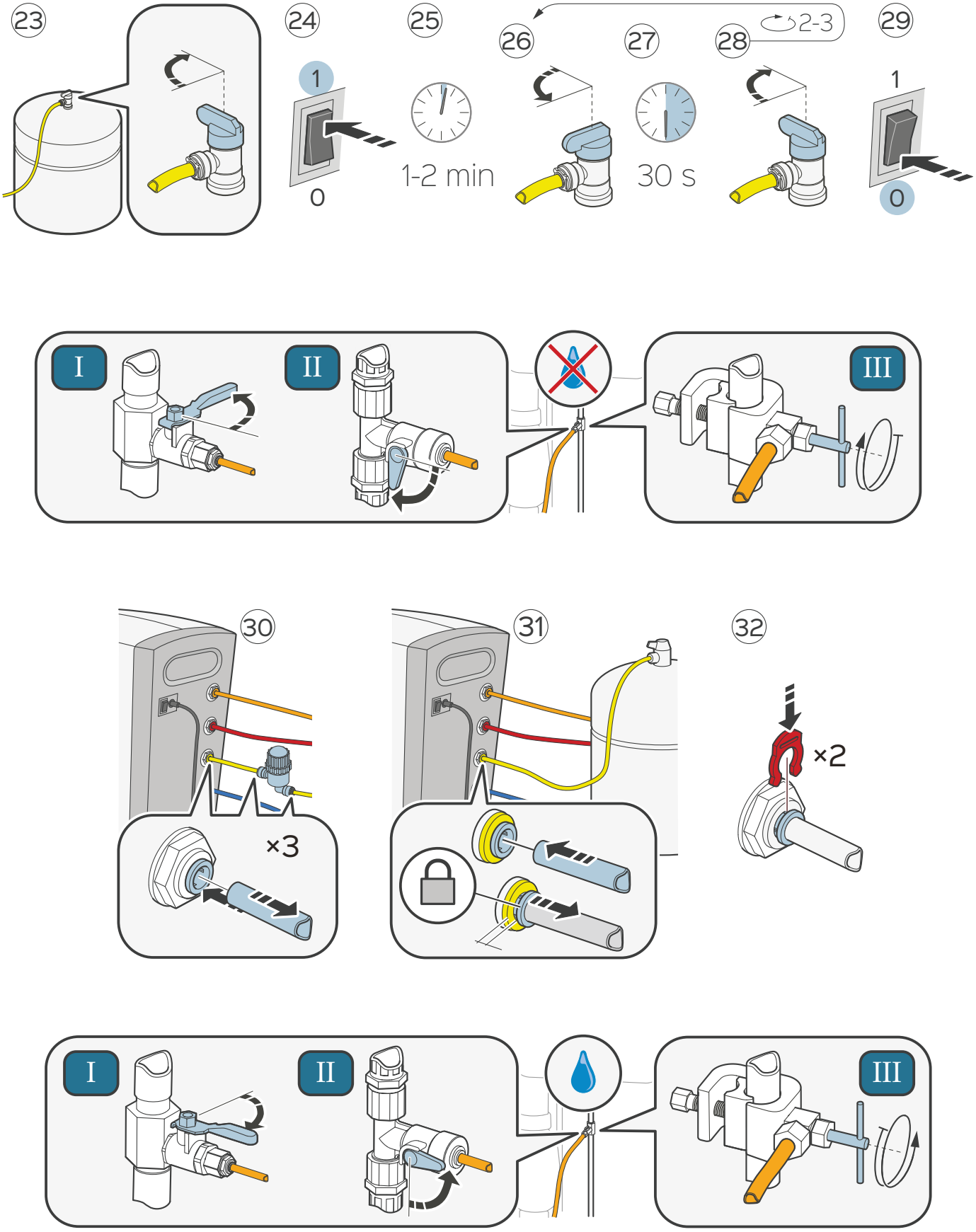
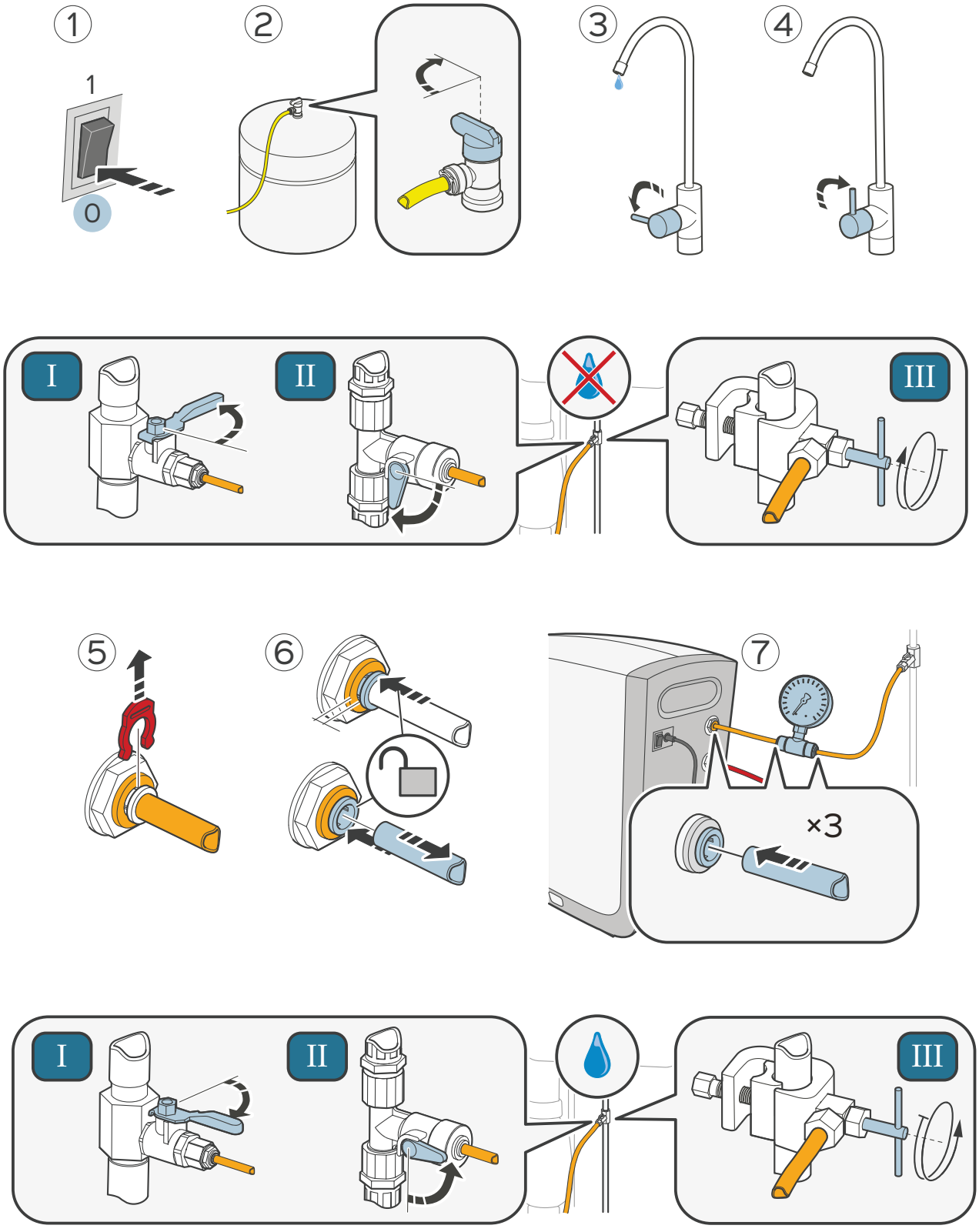


Figure 28. Use disinfectant to clean the system

Do a feed water pressure check



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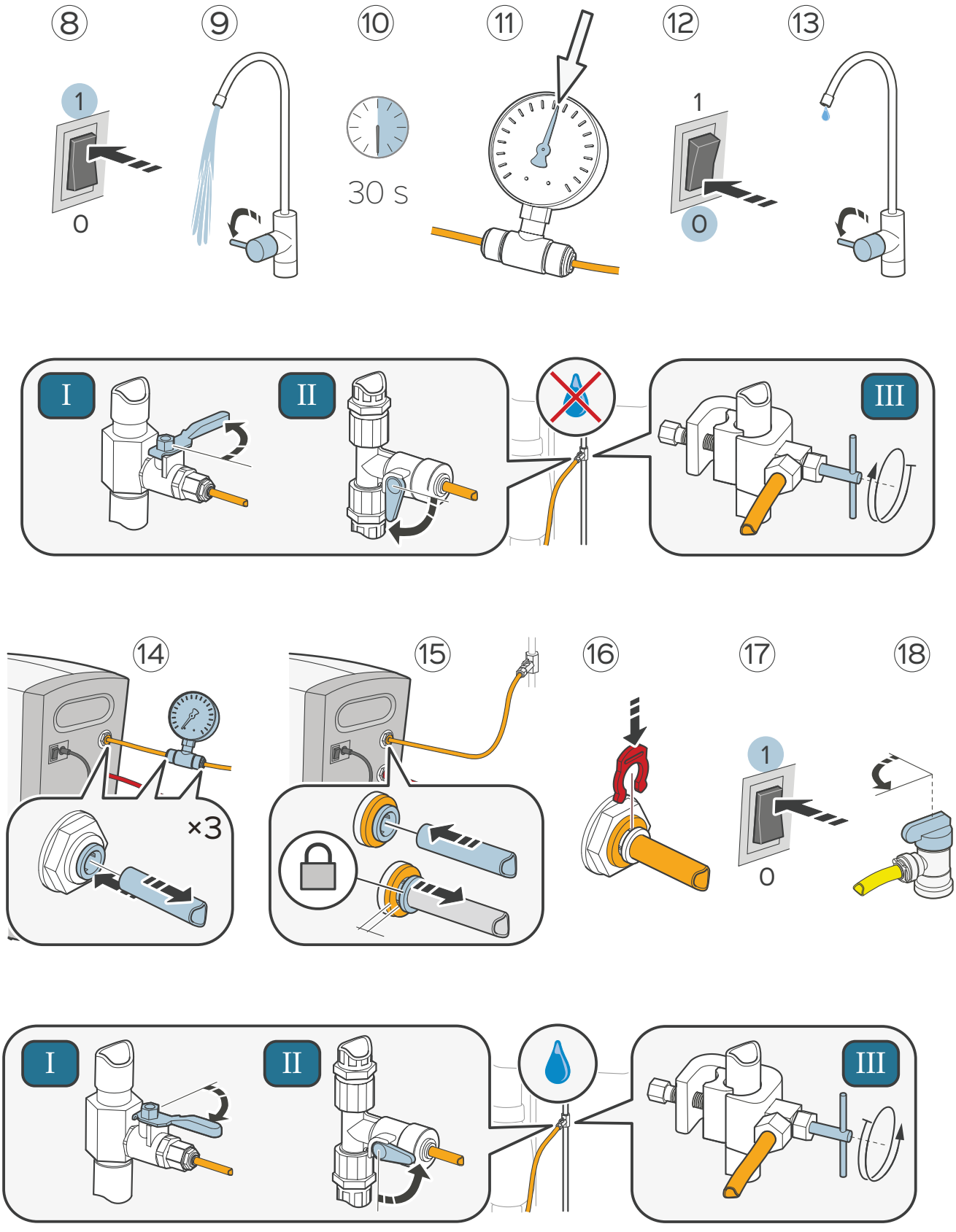

Figure 29. Feed water pressure check

Each year

Replace activated carbon postfilter

Always flush the activated carbon postfilter after the filter is replaced. See “Flush Cleone” on page 15.

See “Product overview” on page 05 for filter position.

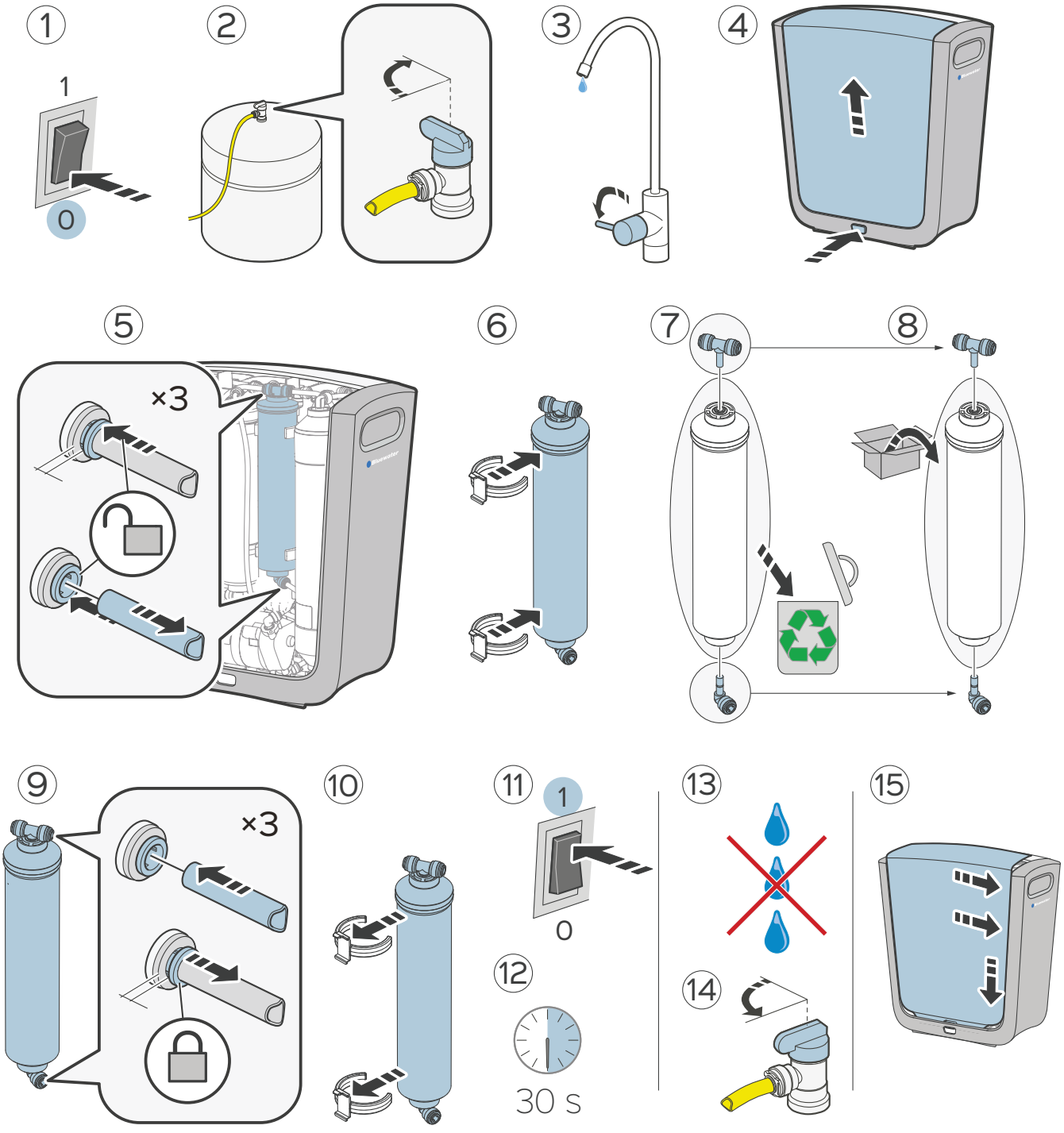

Figure 30. Replace activated carbon postfilter

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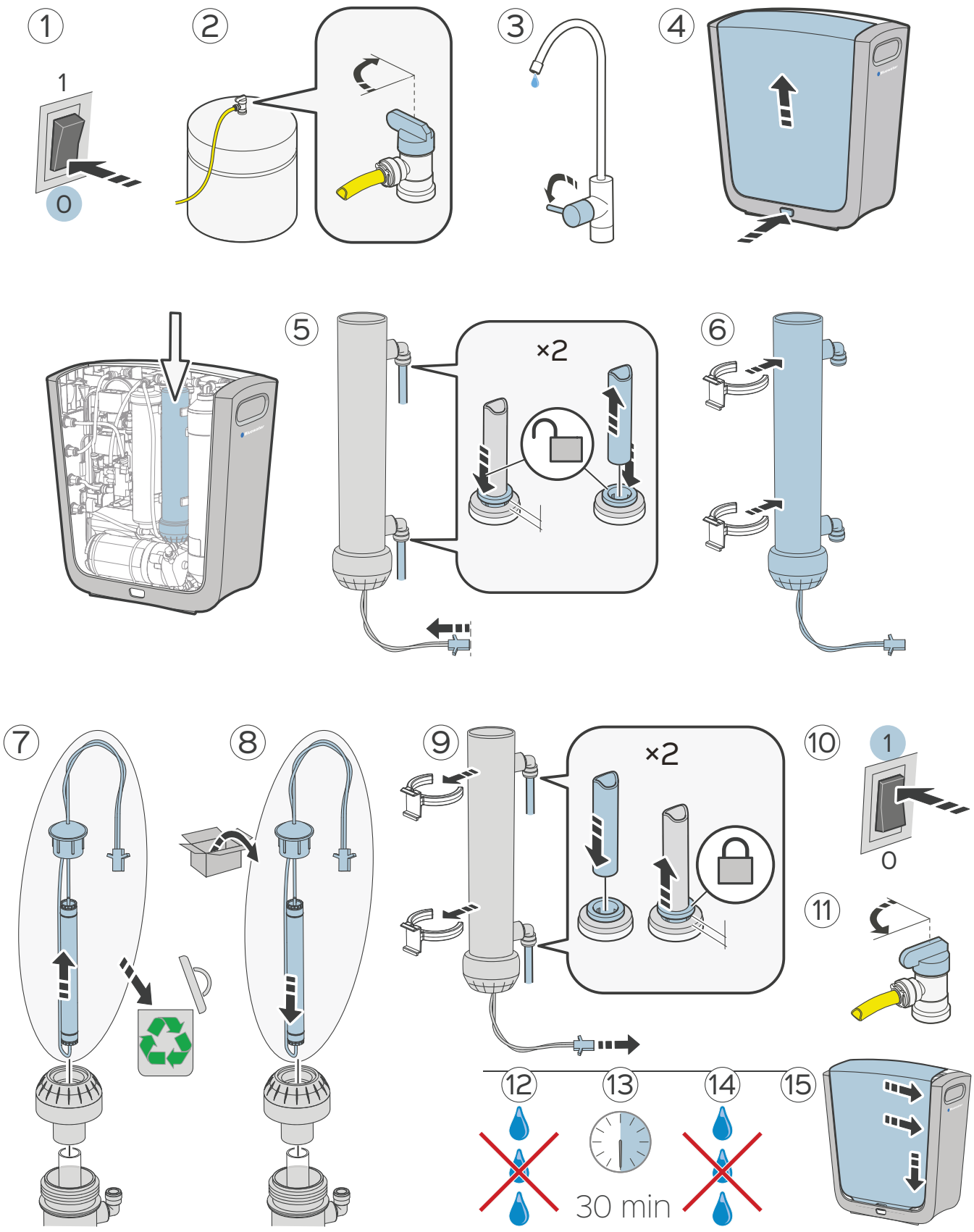

Figure 31. Replace UV lamp

Measure air cushion pressure in clean water tank

Make sure that the pressure in the air cushion in the clean water tank agrees with the recommended levels. It is important for the clean water flow.

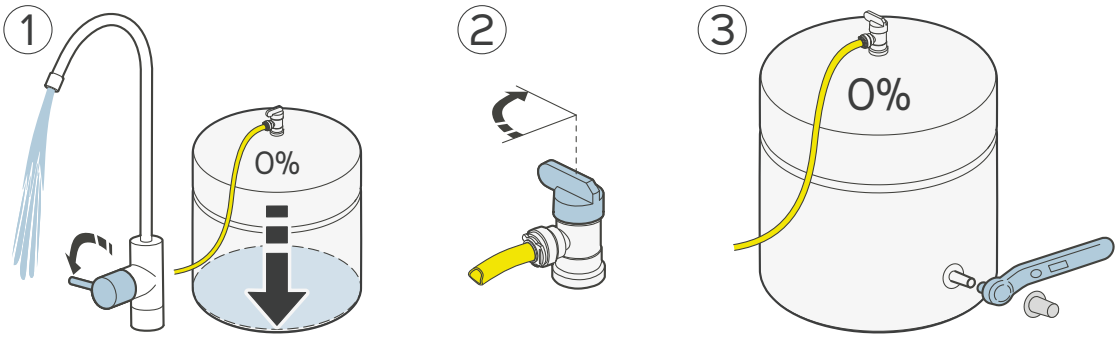

Figure 32. Measure air cushion pressure in clean water tank

Correct pressure levels:

- for tanks put below the kitchen sink: 0.48 bar (7 psi)
- for tanks put lower than the kitchen floor: 0.48 bar (7 psi) + 0.1 bar (1.4 psi) for each metre below the kitchen floor.

Example:	Cleone is put below the kitchen sink, but the clean water tank is put in the basement 3.5 metres below the kitchen floor. The correct air cushion pressure is: 0.48 bar + 3.5 m × 0.1 bar = approximately 0.8 bar (12 psi).

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Each 3-5 years

Replace reverse osmosis membrane

If the rejection rate of Cleone is less than 90%, and the prefilter cartride and the postfilter cartridge are replaced, replace the reverse osmosis membrane.

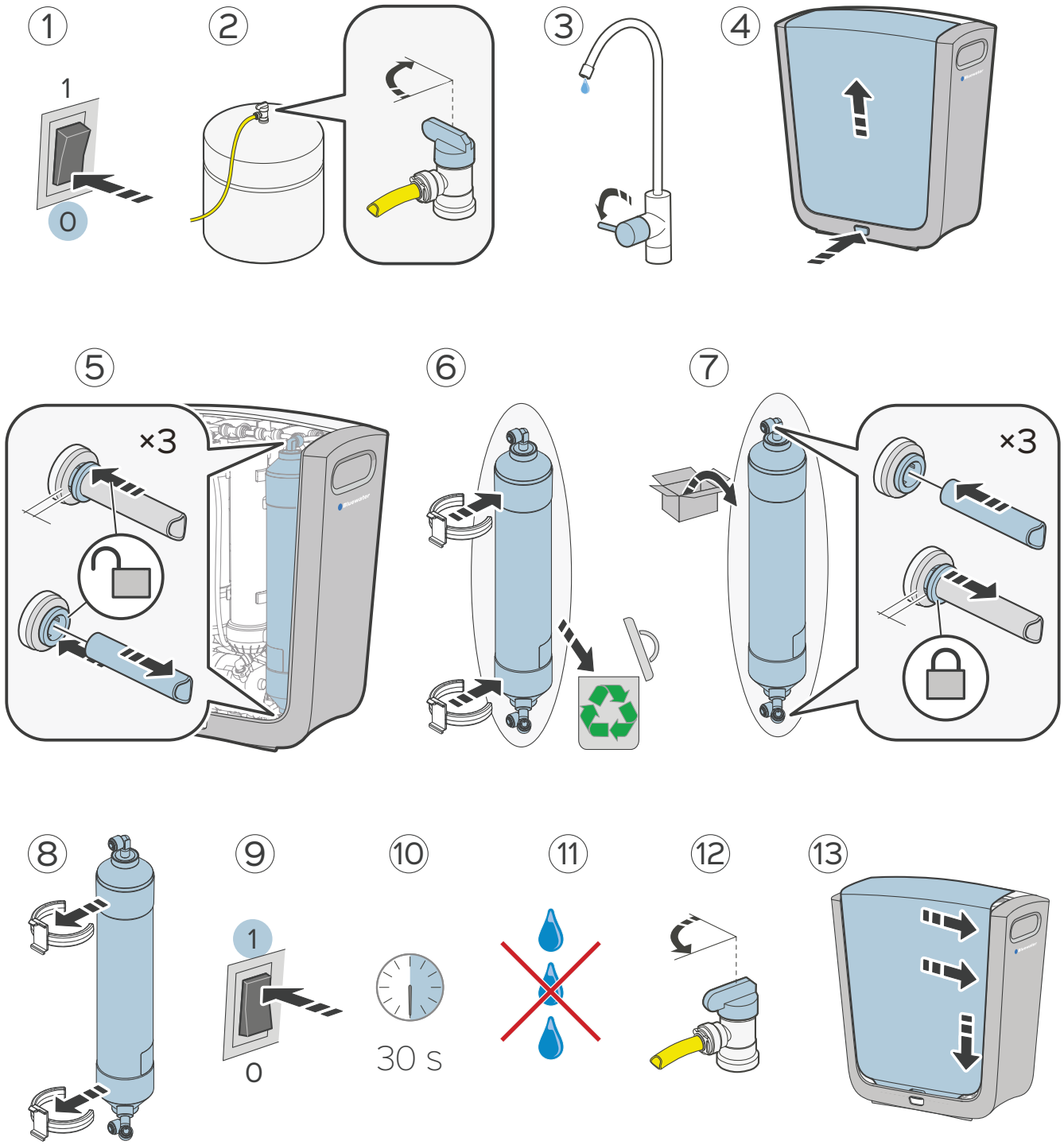

Figure 33. Replace reverse osmosis membrane

TECHNICAL INFORMATION

Parameter/Model	Cleone Classic	Cleone MIN	Cleone UV	Cleone MIN-UV
Size W×D×H [mm (inch)]	215×380×416 (8.5×15×16.4)	215×380×416 (8.5×15×16.4)	215×380×416 (8.5×15×16.4)	215×380×416 (8.5×15×16.4)
Weight [kg (lbs)]	10.4 (22.9)	11 (24.2)	11.4 (25.1)	12 (26.5)
Power supply	95-240V 50-60Hz	95-240V 50-60Hz	95-240V 50-60Hz	95-240V 50-60Hz
Recovery rating	25%	25%	25%	25%
Efficency rating	27%	27%	27%	27%
Feed water temperature min. - max. [° C (° F)]	2-38 (-)	2-38 (-)	2-38 (-)	2-38 (-)
Feed water pressure min. - max. [bar (psi)]	0.8-7 (-)	0.8-7 (-)	0.8-7 (-)	0.8-7 (-)
Power consumption [W]	25	25	31	31
Purified water flow rate [l/day (GPD)]	160 (43)	160 (43)	160 (43)	160 (43)
Average impurities separation rate	93-99	93-99	93-99	93-99
Max. feed water TDS - [mg/l(ppm)]	2000	2000	2000	2000
UV lamp (6W)			✓	✓
Integrated mineral filter		✓		✓
Three stage prefiltration	✓	✓	✓	✓
Activated carbon prefilter	✓	✓	✓	✓
43 GPD Membrane	✓	✓	✓	✓
75 GPD Membrane	option	option	option	option
Water quality sensor	option	option	option	option
Water tank (8L, 12L, 17 L, 40 L)	option	option	option	option
Prolonged contact polishing filter	✓	✓	✓	option
Integrated booster pump	✓	✓	✓	✓
High flow booster pump kit	option	option	option	option
Integrated membrane flushing	✓	✓	✓	✓
Leak protection system	✓	✓	✓	✓
Positive automatic water shut-off	✓	✓	✓	✓
Installation kit	✓	✓	✓	✓

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TROUBLESHOOTING

Symptom	Cause	Solution
The drain water flow is too low during operation.	The prefilter cartridges are clogged.	Replace the prefilter cartridges.
	There is a blockage in the drain water line.	Remove the flush solenoid valve and the flow restrictor. Make sure that no flow blockages can be seen. Use compressed air to blow the flow restrictor in the opposite direction to the usual flow.
The automatic water shut-off does not function reliably.	The feed water pressure is too low.	Increase the pressure. The feed water pressure during operation must be equal to or more than the minimum feed water pressure (see “Technical information” on page 30).
	The tank water pressure has been preset to a value that is too high.	Change the preset tank water pressure to a lower value.
The automatic water shut-off has closed the water feed valve, but water continues to flow to the drain.	The check valve on the filtered water port on the reverse osmosis membrane does not function.	Make sure that the check valve functions correctly. Replace it if necessary.
The feed water shut-off valve does not shut off feed water fully. Some water flows through the valve when it is closed.	There is too much sediment or iron in the the feed water, or it is too hard. This has caused a blockage.	Disassemble the feed water valve. Clean it carefully with citric acid and KF_IRON. If there is a large blockage, it can be necessary to replace the valve. Only approved personnel can replace or repair the valve. Contact your Bluewater dealer for aid.
No water comes from the clean water faucet. The system operation light is off.	Cleone is not connected to power.	Connect Cleone to an electrical outlet and to the power adapter. Make sure that the 24V DC cable from the power adapter is connected to the electical power socket on Cleone.
	Cleone is not started.	Move the power switch to position 1.
	An internal leak has been sensed. Cleone has been automatically stopped.	Contact your Bluewater dealer to repair the leak and reset the system.
No water comes from the clean water faucet. The system operation light is on.	Cleone has been installed for the first time and the system is not filled with water.	Wait for the system to be filled with water.
	The water tubes are not connected or the connection is made incorrectly.	Make sure that the connections are made correctly.
	The feed water pressure is too low and the pump protection system has stopped the feed water supply.	Cleone will start to operate as usual when the feed water pressure comes back.
	Regular maintenance has not been done. Prefilters are clogged.	Contact your Bluewater dealer to do maintenance on Cleone.
The flow rate from the clean water faucet is low.	The clean water tank is empty because of high water consumption.	Upgrade to a larger tank or to a high capacity membrane.
	The air pressure in the clean water tank is low.	Contact your Bluewater dealer to restore the correct air pressure in the clean water tank.
	The feed water pressure is too low.	Upgrade to a Cleone model with a booster pump.
Too much continuous noise during water purification.	It is necessary to do maintenance on the booster pump.	Contact your Bluewater dealer.

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